IN THE CLAIMS

1. (currently amended) A method of inspecting a portion of a weld between at least two materials, said method comprising:

mounting at least one ultrasonic phased array probe ~~including at least one transducer having a plurality of elements~~ within a probe housing containing a liquid therein, each ultrasonic phased array probe comprising at least one transducer having a plurality of elements, the at least one ultrasonic phased array probe rotatable within the probe housing;

attaching the probe housing adjacent an outer surface of the portion of the weld such that the liquid is adjacent the outer surface of the portion of the weld; and

scanning the weld with the at least one ultrasonic phased array probe.

2. (original) A method in accordance with Claim 1 wherein the weld is between at least two similar materials.

3. (original) A method in accordance with Claim 1 wherein the weld is between at least two dissimilar materials.

4. (currently amended) A method in accordance with Claim 1 wherein mounting at least one ultrasonic phased array probe within the probe housing further comprises rotating the at least one ultrasonic phased array probe within the probe housing about a plurality of angles using an actuator.

5. (previously presented) A method in accordance with Claim 1 wherein mounting at least one ultrasonic phased array probe within the probe housing comprises positioning at least one ultrasonic phased array probe partially within the liquid and at a predetermined location along the weld.

6. (previously presented) A method in accordance with Claim 1 wherein attaching the probe housing adjacent to the surface of the weld comprises releasably attaching

the probe housing such that a water-tight seal exists between the housing and the surface of the portion of the weld, wherein the seal is an elastomer.

7. (original) A method in accordance with Claim 1 wherein scanning the weld with the at least one ultrasonic phased array probe comprises electrically steering at least one of the elements such that an ultrasonic beam is emitted at a plurality of steering angles.

8. (original) A method in accordance with Claim 7 wherein electrically steering at least one of the transducer elements comprises actuating and deactuating at least one of the transducer elements along a path in a predetermined order.

9. (original) A method in accordance with Claim 7 wherein electronically steering the emitted ultrasonic beam comprises actuating at least one of the elements along a substantially axial path across the portion of the weld in a linear path in predetermined increments from an outer surface toward an inner surface.

10. (original) A method in accordance with Claim 7 wherein electronically steering the emitted ultrasonic beam comprises actuating at least one of the elements along a substantially circular path across the portion of the weld from an outer surface toward an inner surface.

11. (currently amended) An apparatus configured to inspect a portion of a weld between at least two materials, said apparatus comprising:

a probe housing containing liquid; and

at least one ultrasonic phased array probe mounted within said probe housing so that said at least one ultrasonic phased array probe is located partially within said probe housing liquid, said at least one ultrasonic phased array probe rotatable within said probe housing.

12. (original) An apparatus in accordance with Claim 11 wherein said at least one ultrasonic phased array probe includes at least one transducer having a plurality of elements, said transducer configured to actuate at a frequency, a pitch, and an aperture.

13. (currently amended) An apparatus in accordance with Claim 11 wherein said at least one ultrasonic phased array probe includes a frequency and is configured to rotate within said probe housing about a plurality of angles using an actuator.

14. (original) An apparatus in accordance with Claim 11 wherein said at least one ultrasonic phased array probe is configured to:

emit an ultrasonic beam;

electronically steer said ultrasonic beam along a substantially axial path across said weld in a linear path in predetermined increments from an outer surface toward an inner surface; and

electronically steer said ultrasonic beam along a substantially circular path across said weld from said outer surface toward said inner surface.

15. (currently amended) A method of inspecting a portion of at least two pipes coupled by a weld within a nuclear reactor pressure vehicle, said method comprising:

mounting at least one ultrasonic phased array probe within a probe housing partially containing a liquid therein, wherein the at least one ultrasonic phased array probe includes at least one transducer having a plurality of elements, and the probe housing is configured to position the at least one ultrasonic phased array probe at a predetermined location on the weld, the at least one ultrasonic phased array probe rotatable within the probe housing;

attaching the probe housing adjacent an outer surface of the at least two pipes such that the portion of the weld to be inspected is positioned therein and the liquid is adjacent the outer surface of the weld; and

scanning the portion of the weld with the at least one ultrasonic phased array probe, wherein the probe emits a steerable ultrasonic beam.

16. (currently amended) A method in accordance with Claim 15 wherein mounting at least one ultrasonic phased array probe within the probe housing further comprises rotating the at least one ultrasonic phased array probe within the probe housing about a plurality of angles using an actuator.

17. (previously presented) A method in accordance with Claim 15 wherein attaching the probe housing adjacent the surface of the at least two pipes comprises releasably attaching the probe housing such that a water-tight seal exists between the probe housing and the surface of the portion of the weld, wherein the seal is an elastomer.

18. (original) A method in accordance with Claim 15 wherein scanning the weld with the at least one ultrasonic phased array probe comprises electrically steering at least one of the transducer elements at a plurality of steering angles.

19. (original) A method in accordance with Claim 18 wherein electrically steering further comprises actuating and deactuating at least one of the transducer elements along a substantially axial path across the portion of the weld in a linear path in a predetermined order from an outer surface toward an inner surface.

20. (original) A method in accordance with Claim 18 wherein electrically steering further comprises actuating and deactuating at least one of the transducer elements along a substantially circular path across the portion of the weld from the outer surface toward the inner surface.